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Oral History Interview

NSA-OH-40-80

with

ARTHUR J. LEVENSON

25 November 1980

"M" Conference Room, NSA, Ft. Meade

By R. D. Farley

FARLEY: Today is the 25th of November, 1980. Our interviewee, Mr. Arthur J. Levenson. Mr. Levenson, a former U.S. Army Signal Corps Officer, served as a cryptanalyst at Bletchley Park, England during World War II. He was also involved after the war in the TICOM program and brought back to England a German Communications Train, which was a mobile message center, complete with equipment. German personnel wanted to come to England, but he persuaded them to stay back in France. Interview is taking place in the "M" Conference Room, Headquarters Building, NSA, at Ft. Meade. Interviewer: Bob Farley.

Mr. Levenson will recount his experiences, both as a cryptanalyst during the major part of the war and then on his TICOM tour throughout Europe, after the war, where they recovered the German Communications Train consisting of six or seven vehicles. This interview is classified SECRET COMINT CHANNELS. This is NSA Oral History 40-80.

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LEVENSON: Do you want me to begin?

FARLEY: Give me a little bit of your family background, your education, etc. Before you got into the military and then we'll take it from there and follow it through. Just where you went to high school and college.

LEVENSON: Well, I went to City College in New York, and then I did some grduate work in mathematics at various places. And I was working on mathematical tables when I was introduced, I came to Washington, introduced to then Professor Kullback at George Washington University.

FARLEY: Were you taking graduate work there?

LEVENSON: No, I just happened to come down. No, I was in New York.

FARLEY: Oh.

LEVENSON: But, I had a friend who told me that Kullback was involved in some work that might be interesting. And I talked to Kully and he registered me in the crypt courses. I was doing them by correspondence when I was suddenly called to active duty. I had been in the Reserve, but I had forgotten about it. That was in January of '42. And I had to report to Fort Dix, which I did. Life was difficult because they'd called back all people with previous service, but I hadn't had any. So I had no uniform. It was 4 below zero and I had to wear a white shirt. I was generally miserable.

FARLEY: Where did you get your commission, ROTC?

LEVENSON: No, I went to OCS, later. Kullback had introduced me to a Captain Hayes. And when I was in the Army, I said, "I've got to do something." So, I wrote a letter to Captain Hayes, saying that I'd taken the crypt courses and was now in the Army. I wanted the Army to notice that somebody's in the Army that knows. And, may he rest in peace, blessed forever, he wrote back right away signing "Major" Hayes, that, I was going to be transferred to Little Silver, which I thought was some place in Arizona. Turned out it was Red Bank, New Jersey.

FARLEY: Were you in the Infantry at Fort Dix?

LEVENSON: I was in the replacement depot and yes, the Infantry, and I was about to be shipped to Fort Jackson, South Carolina. Then I got this letter, and I was told to report at, I don't know, five in the morning to go to South Carolina, but I didn't go. And then they called me in and said, "What are you doing, you can get court martialed," and I said, "Well no, I'm supposed to report to Little Silver," and I showed them the letter. Well, they said, "You should have come nonetheless." I was punished or something, but they didn't court martial me. Finally I did get to Little Silver. I went into the crypt program thanks to Major Hayes. I was told privates don't write letters

to majors and call them "Captain." I learned that later. Hayes was a marvelous man. He later became General Hayes.

FARLEY: Was it a basic crypt school, Arthur?

LEVENSON: Yes, the crypt school was at Fort Monmouth.

FARLEY: Right. Remember any of the instructors there?

LEVENSON: Well, there was a Captain Leighty. Max Leighty, was the CO. And one of the instructors was William Kuntzler, who became famous in other grounds.

FARLEY: In Korea, yes. Korea? Famous defense attorney for leftists and in civil liberty cases

LEVENSON: And Bill Bundy was there at the time. I met him. And I can't recall some of the other names, but some of them were people I came upon later.

FARLEY: Was the school right in Monmouth or was it at Sea Girt?

LEVENSON: No, no. School was right in Monmouth, yes. As compared to Fort Dix it was very similar, quite a nice place.

FARLEY: Was the class made up of 40 or 50 people? Do you have any idea?

LEVENSON: Something of that kind, maybe a little smaller. And then we took language classes. In fact, Kuntzler taught me French. And I guess we took typing and a few other things.

FARLEY: Did they give you a briefing or an orientation before you went to the class, and said you're going to be doing secret work and this is the basis of it?

LEVENSON: I don't recall. I think the school itself, or the building, was off limits to only people who were students or instructors, people connected with the school. You had to have a pass or get in, and there were guards. If you didn't have it, you couldn't get in. Actually, the guards were just students who would sit at the front doing their work and taking turns. And I recall one interesting think, we were told to buy war bonds and we each took out for one and they took a $1.25 off your pay. A war bond had a gestation period of a baby elephant. It took it about 18 months to get. There was a competition and the company next to us won hands down, because one of the privates in the company named William McChessney Martin, took $10,000 worth. He was the head of the New York Stock Exchange. He was a private in the Army--only in America. He later became an officer, but his company won the prize. I remember that part.

FARLEY: Did you get involved in the regular military part of the Army, the drilling, and the KP and the rest?

LEVENSON: Oh yes. Well, I did that at Fort Dix. In fact, at Fort Dix I had to do KP in civilian clothes because I didn't have a uniform. That's rather humiliating because

in the fatigues you look like a soldier on a detail, but in civilian clothes you look like hired help. I kept complaining that, "If I'm in the Army at least I ought to have a uniform." They told me to "Go and get processed." The Army was quite segregated in those days and there was a whole black company getting processed, I was the only white one.

FARLEY: Were you?

LEVENSON: The Black boys said that was pretty funny, too. At each counter I came to, they said, "What are you doing here?" But I got a uniform. I had a marvelous experience. I broke my glasses, and this was at Fort Dix, which was a terrible place. I said, "Where do you get glasses?" They said, "You go on sick call." I said, "Well, I'm not sick!" "That's all right, you go on sick call." I went on sick call. It was the dead of winter and there were all people with colds, wheezing, and sneezing, and blowing. I was trying to avoid all the germs. Finally, my turn comes. The guy shoves a thermometer in my mouth, and I started to say, "But that's not what I'm here for." And he said, "Shut up. Don't talk while your temperature's being taken." So I take out the case for my glasses, and I point at the broken glasses. He takes the thermometer out of my mouth, and said, "Why didn't you say so?"

FARLEY: That was your introduction to military discipline?

LEVENSON: That was my introduction. So, he said, " You have to go to the base hospital." I said, "How do I get there?" He said, "You take the ambulance." And I said, "But I'm perfectly all right. I can walk." "You take the ambulance!" So, I sat and waited and finally an ambulance came, about six of us were pushed in and they shut the doors. There were two dirty windows in the rear, and it was a cold cloudy day. You could practically see nothing inside there. There were every one of them moaning and groaning, one guy opposite me saying, "Gee, I got the clap again. Here, I got the clap again." Every time we would hit something he would be pitched over to sit on my lap. I'd push him back. And finally we got to the hospital and another guy with conjunctivitis he couldn't see two feet in front of him. But he knew his way to the eye clinic, like a mouse in a maze, because he'd been there so many times. He said, "Follow me." Well, he was walking very slowly, and then he'd go along. The hospital is one story high and covers about two acres and when you open the door all you see is corridors, endless corridors. Well, I finally came along. Then they'd be punctuated with fire extinguishers and he'd always walk into those. He couldn't see. I had to steer him around the fire extinguishers. Finally, I got to the eye clinic and I said, "I have broken glasses." They said, "Is it an emergency?" I said, "No." He said, "Well, come back tomorrow." Only emergencies today.

I said, "I've acquired three new sicknesses coming here." "That's all right, no emergencies."

FARLEY: Typical Army.

LEVENSON: I said, "How do I get back?" "You have to take the ambulance." I had to wait in the emergency room. They were taking people with missing ears and broken legs. All the accidents you know. Finally there was nobody else in the ambulance, the driver, so I sat up front with the driver. He said, "Where do you want to go?" I said, "Take me back to Brooklyn, take me anywhere." So he took me back to the company. Next day after roll call, I started out on foot to the hospital. The hell with the ambulance. Well, I didn't get very far when somebody came running up and said, "Sergeant Liedek wants you." He was the sergeant in charge of us. Although he had 29 years of Army service his English was still very poor, and I understood he really had 35 years, but six years had been bad time for him. So he didn't get credit for that so, he only had 29 years. And he started shrieking at me about where was I going all by myself. I showed him, because at the hospital they wrote down "Come back." He said, "Well you can't go anywhere by yourself." That day, the Army had decided to salvage garbage, paper. They were salvaging paper. Sergeant Liedek's way of doing that was to dump all the garbage in the company street and then pick the paper out of the

garbage. He had a detail doing this, but to punish me he dismissed the detail and put me on all by myself to salvage paper out of the garbage. I still had my broken glasses. I figure I looked like a big insect in a huge pile of garbage. One person creeping around. And, then, the company commander came along, his English was a lot better. And, Liedek explained to him, "There's the man." So, I didn't know what I had done. So I explained to him what had happened. And he said, "Well, you shouldn't run off by yourself. You can go to the hospital, but tell people where you're going. You can't just disappear." I said, "Can I go now?" He said, "No, go back to the garbage pile." I mean, I hadn't been punished. So finally, after lunch, I got down to the eye clinic. They were taking us, and then, fortunately I found some chum from school who'd gone to eye school and was now an optometrist or something. He said, "What are you doing here?" We greeted each other, and then I told him I had these glasses. He said, "Oh, I'll take care of them, go sit down." The other guys in front of me were looking for lost glasses. I go very nervous about the whole thing. But he assured me he would take care of me.

FARLEY: He took care of you.

LEVENSON: Yes, so he had them about three days later, and I went down. They said, "Did this happen on duty?" And I

said,"No, I don't think so." They said, "That will be two dollars."

FARLEY: They charged you for it?

LEVENSON: They did because it wasn't duty connected.

FARLEY: And you didn't have two dollars, I bet.

LEVENSON: Well, two dollars. I don't know, they deducted it. But I finally got my glasses. But it was quite an experience. Anyway, Fort Monmouth was a great improvement.

FARLEY: Yes. Did you finish your crypt course there?

LEVENSON: I didn't quite finish when I was shipped out to Washington, but I was in Crypt Three something. I was toward the end of Crypt Three

FARLEY: So you came down to Arlington Hall?

LEVENSON: Yes.

FARLEY: In what, March, April?

LEVENSON: Yes, yes. About April of '42.

FARLEY: And into the Second Signal Battalion?

LEVENSON: Wait, wait a second. Hold on a minute. This is January of '42. I must have come down in March. Yes. Because, yeah, in March of '42 and then we were living on the economy, so we got a room out by Glebe Road along the Boulevard there. It was very nice.

FARLEY: Paid you a differential?

LEVENSON: Yes, well, they paid for housing.

FARLEY: Yes.

LEVENSON: We lived off the post. It was a good life.

FARLEY: What was the reception when you went to Arlington Hall? Were they waiting for you with open arms there?

LEVENSON: No, first we were on the guard. They didn't have a guard so they made us guards, but they wouldn't put bullets in the guns. They were afraid that we'd hurt ourselves. So we had fine guns but no ammo.

FARLEY: You were a cryptanalyst and were made a guard?

LEVENSON: Oh yeah, there were several of us. And, we had to say, "Halt. Who goes there?" and all that other stuff. We carried them but they said we were allowed to show the guns only if they were misbehaving.

FARLEY: Remember who the CO of the Second Sig was?

LEVENSON: Schukraft, I believe?

FARLEY: Was it Schukraft?

LEVENSON: Yes, Major Schukraft. Oh, I never saw him. I think I saw him once coming into the area. Then I guess it was Frank Rowlett who took me off the guard. I don't know. I got to chat with him and he took me inside. And I was put to work on J19, which was an interesting problem.

FARLEY: That's a Japanese code?

LEVENSON: Japanese. It was a Japanese code, but the code groups were 2 letters or 4 letters and with blanks. You put it in and then read it down and the blanks sort of messed it up, but the blanks only went about 10 lines down; below that it was without blanks. And that was

just a plain transposition.

FARLEY: Oh, I see.

LEVENSON: So you used the stuff below the blanks. You took the rear end of the message and wrote that out on various lists or scored, taking columns and matching the columns, and then you scored the digraphs. You knew what the good code groups were.

FARLEY: I see.

LEVENSON: That worked very well, but it depended on having enough material below the blanks. Because the blanks messed up the code. And you couldn't match a column because half of it wasn't matched properly. Because when a blank came in it knocked everything off. And, Bob Ferner was the genius on that, as he was on many other problems. A terrific cryptanalyst. And they had a little table, that if the message was a certain length, anybody could do it. If it was a little shorter, then you had to be a little better or more clever. And then, at a certain length, it said, "Give to Ferner."

FARLEY: Oh yes.

LEVENSON: He was the only one that could solve them if they were really short. Only Ferner.

FARLEY: Did Rowlett have a section there? Was he the Chief?

LEVENSON: Yes, he was. He was one of the big wheels. It was B2, B4, I don't know. He was already a lieutenant.

FARLEY: He was in uniform by then?

LEVENSON: Oh yeah, he was in uniform.

FARLEY: I see.

LEVENSON: And then, he introduced me to Colonel Svenson. And everyday Rowlett would come by and ask me, "How do you spell your name?" I said, "Well what's to spelling my name," and I'd spell it. And then the next day I'd ask, "Why does anybody care?" And he said, "Well, Colonel Svenson thinks you're Swedish." I said, "Tell him he's got the wrong number." I don't know why, maybe he was waiting to hear a double N or a double S or something.

FARLEY: Son of Leven.

LEVENSON: Colonel Svenson thought Levenson was a fellow Swede and he wanted to know all the Swedes there. Sorry. And then they built the barracks and we moved into the barracks, and then life was difficult.

FARLEY: Were you back in the Army by then?

LEVENSON: Yes, I was in the Army the whole time. I never got out of the Army.

FARLEY: I mean pulling duties, extra duties?

LEVENSON: Oh, yeah, yeah. I was doing KP and all that stuff. But, we weren't doing KP when I was living off the Post. That's why life was different. When we got into the barracks then it started to happen. And then I remember they had one broken mirror in the whole barracks. Steve Wolfe was a master sergeant and the rest of us were all

nothing. Everybody was afraid of Steve and he'd stand in front of the mirror and shave. And all the rest of us would try to peek around and there'd be 10 guys around one piece of mirror. You didn't know whose face you were shaving.

FARLEY: Pretty primitive.

LEVENSON: And it was cold, and it was unpleasant and there was KP. And then I heard about OCS. I heard about it when I was living off the Post. Oh well, what difference does it make. Maybe I'll go to OCS. Living in the barracks was another matter, so I applied for OCS. And I went to OCS in April of '42.

FARLEY: April of '42.

LEVENSON: Yes.

FARLEY: So you were one of the early classes.

LEVENSON: Yes, so I got out in June. No, no, that's not right. I guess I must have gone in '43, yeah, that's right. It couldn't have happened all that fast. Because see, I didn't get down, I didn't come down until about April of '42 and I went in April of '43.

FARLEY: Okay. Remember the class number?

LEVENSON: I think it was 20. Yeah, either 19 or 20 something there. Bob Packard was the class ahead of me. It was, I think 20. So I think it was '43.

FARLEY: June 10, '43.

LEVENSON: Quite possibly, Rube Weiss was in the class?

FARLEY: What was your serial number? 0164...?

LEVENSON: [redacted] (b)(6)

FARLEY: I was in the same class.

LEVENSON: Were you really? You sure? It was June of '43.

FARLEY: Yes.

LEVENSON: April to May, May to June. That was 90 days.

FARLEY: 90 days.

LEVENSON: Well, so I think I didn't get out until July then.

FARLEY: Oh, was it?

LEVENSON: I think so. What class were you in?

FARLEY: I thought it was 20, maybe it was 19.

LEVENSON: Yes, but I, you may have been, maybe I was 21.

FARLEY: March, April.

LEVENSON: Yes, you got in in March.

FARLEY: Yes.

LEVENSON: I thought I got in in April, but maybe we were in the same class.

FARLEY: Could be, yes.

LEVENSON: Were you sent to...?

FARLEY: Arlington Hall.

LEVENSON: Arlington Hall?

FARLEY: Yes.

LEVENSON: Had you been there before?

FARLEY: No, I came back from New Zealand to go to OCS.

LEVENSON: Yes, because the only people who I remember in the class that went back to Arlington Hall were the people who

came from there.

FARLEY: Yes, no, no. I didn't know any of them.

LEVENSON: Except Callimahos. Callimahos had been there.

FARLEY: Callimahos was there.

LEVENSON: Oh, you know who was sent down to Arlington Hall, and I told him, gee, I didn't think he could get in was Willie Weissband, remember?

FARLEY: Right.

LEVENSON: Shoot you traitor!

FARLEY: Right.

LEVENSON: Well, Weissband was in the class and he said he thought he going to go because he knew I'd be there. I said, "Where were you born?" He said, "Some exotic place," and I said, "Yes, I don't know if they will accept you." They should have listened to me.

FARLEY: Right.

LEVENSON: And then I found him here. He said, "See, I'm here." I said, "Gosh."

FARLEY: Did you take any specialized training after OCS or did you come right back to the Hall?

LEVENSON: I came right back to the Hall, and then I was shipped overseas in August.

FARLEY: Did they give you any orientation training at the Hall, before you went to England?

LEVENSON: No, I came back. I worked with Bob Ferner and Walt Jacobs and Dan Dribben. A few characters. Roy Johnson came back from

England and mentioned this thing. And we went over with shipment, 0169A. And Bill Bundy was there, the head of the group, and there was about 20 of us or 25, mostly officers, a few enlisted men. George Vergine and Arthur Lewis.

FARLEY: Selmer Norland in that group?

LEVENSON: Selmer was in that group. Yes, he was an officer. Selmer and then Art Lewis and George Vergine, a few other guys were enlisted men. And then there were two other shipments that joined us after. We were the first ones. And I worked in Hut-6, they put me in a room with Dennis Babbage who was a mathematician from Cambridge, and Dr. Akin. Neither of them spoke any language that I had ever heard before. Babbage spoke in a very refined Cambridge accent and also he mumbled. And Akin spoke Glasgow, which is another language, and they put me between them and they talked literally over my head. I don't now. Babbage would mumble and Akin would say, "Oh, yes, oh yes." I don't know what they were talking about.

FARLEY: You had to set it up then when you went to Bletchley for the first time.

LEVENSON: Yes, we were the first bunch there. And we were treated like, oh, marvelous. I mean Americans were very few and we were supposedly integrated, buy we were treated as something very special. They were very

nice to us. The Director would invite us out, give us pink gin. It was really great. And they all made a fuss over us because we were the first Americans.

FARLEY: Was it pretty much across the board? Were there cryppies and linguists, and TA's?

LEVENSON: Yes. Cryppies, linguists, and some in TA. Yes. Selmer went into the reporting end because he was a pretty good German linguist.

FARLEY: Right. What sort of guidance did you have? Did the people at Arlington Hall say, "Go over there and set up an organization."

LEVENSON: Well, Roy Johnson had made some preliminary arrangements about what was done. The operation was going and we were just inserted into it.

FARLEY: Oh.

LEVENSON: They just made room for us. And, see, we were integrated.

FARLEY: Did you have enlisted troopers with you?

LEVENSON: Well, yes, Lewis and Vergine were enlisted.

FARLEY: Doc Neilson, was he with your group?

LEVENSON: Jim Neilson, yes. Yes, Jim, he was enlisted, yes. In fact, the enlisted men were quite a remarkable lot. We took over another girl's place at Bletchley and they had a day room. You'd go in the enlisted men's day room and you'd find things like Turkish/Latin dictionaries which I didn't know had existed. We had all

kinds of very specialized people. Oh, when we landed at Replacement Depot up near Litchfield, there was Bill Bundy, and me, and Stewart, and a guy named Paul Whitaker who was a Professor of German at University of Kentucky. About five of us or six. The guy said, "We don't have record of your Army General Classification test scores. Do you mind taking the test?" We said, "All right." So they put us down, we took the test, and they graded it right after it was over. They guy said, "My God, I've never seen scores like this before. You guys are smart enough to be in intelligence." And Bill Bundy got a 161 which is the highest score ever recorded.

FARLEY: Oh yes.

LEVENSON: And 162 is perfect; he got one wrong. The rest of us were all, I think all over 150. And the guy said, "My God. Fantastic scores."

FARLEY: Great.

LEVENSON: Then we finally made it to Bletchley.

FARLEY: Was there an organization, a Signal Corps Company or Battalion?

LEVENSON: Yes, it was, what the hell were we called? Yeah, we had a name.

FARLEY: 68th...?

LEVENSON: 6811th. Yes there was 6811, 12 and 13, and we were 11. We were the first, yes.

FARLEY: Eleventh.

LEVENSON: And we were under--technically, our local commander was Bundy. The next echelon was Roy Johnson, who was down in Birtley Street Square. Where the devil was it? Some building down in London. And then Colonel Bicher. He was the next one. George Bicher.

FARLEY: Okay, okay. Was he a G-2?

LEVENSON: I don't know; he was a full colonel, and I don't know what his title was. But, everybody reported to him.

FARLEY: Were you people billeted right at Bletchley?

LEVENSON: Yes, we were. We were first billeted in Bletchley, and I was in Goldsborough. Al Friendly was in the same house. And I saw him the other day, and remembered how cold it was, particularly early in the morning, sitting on that toilet. You really needed that. It was absolutely freezing.

FARLEY: Yes, yes.

LEVENSON: And, then they moved us into this Little Brickhill, to that house. And then we got Army food. It wasn't much better, but for while we lived in Bletchley. They had to...No! This was in Bedford. Our first billet was in Bedford, which was about 20 miles away and we had to take a train every morning.

FARLEY: Yes.

LEVENSON: Alex Sprangler was always late. The sight was always, the train would be pulling out and Alex fluttering with his coattails flying, "Hey, wait for me!"

FARLEY: You talked about the huts. Now, were they huts as such?

LEVENSON: They started out as huts, but by the time we got there they had built some respectable sort of buildings. But, originally they were Nissen huts, and they were numbered.

FARLEY: Oh, I see. They were on the complex?

LEVENSON: Yes, it was an old estate that belonged to Lord and Lady Samuel, some name like that. And the government took it over, the whole estate.

FARLEY: I see.

LEVENSON: Took over all the grounds. They had put up these huts, and by the time we got there, they were more like buildings, but they still referred to by the original numbers.

FARLEY: As huts?

LEVENSON: Names, as huts.

FARLEY: You were in Hut-6.

LEVENSON: Yes. Hut-6 was the ENIGMA.

FARLEY: The ENIGMA?

LEVENSON: The ENIGMA.

FARLEY: Okay. Arthur, would you mind describing an average day. You came in and you did something, and...

LEVENSON: Oh yes. Well, we were assigned specific keys to work on and you took care of your key. And what you did was, get the traffic that had been sorted out by the TA types. All the traffic on your key was in a neat bundle. And you

checked it out, looked for, first for sillies, (cillies?) and things rather special that might be exploited. Then look for the crib message. What you had to do was determine that this message actually had the crib you were looking for, and match the plain and the cipher. And then compose what we call a "menu," which was to be run on the Bombe, by matching the plain and cipher. Then any pairs that had a letter in common, that there was link between, and you had to write it out on a width of 26 so that you see what the wheel position was at each of these plain cipher pairs that matched with each other. And the menu had to be strong enough so that in the run you would expect that by chance one stop of the wheel order. That was to make sure the Bombe was working. And some of those stops were random. And then you picked up the stops from the previous day, and picked out which was the true one, and worked out the rest, the whole rest of the key, and decrypted a bit of the message to make sure that you had things correct.

FARLEY: So you would get it to plain text then.

LEVENSON: Yes.

FARLEY: To German plain text.

LEVENSON: At least the crib message.

FARLEY: Okay.

LEVENSON: And then, did we decrypt all of the traffic or did we send that to a special place? And then afterwards, it was decrypted, it went to Selmer in Hut 8.

HUT 8 WAS THE EQUIVALENT OF HUT 6 BUT FOR NAVAL ENIGMA.

FARLEY: The linguist, yes.

LEVENSON: And they actually translated and wrote reports. But what we did essentially was make these menus, send them to the Bombe, get the runs from the previous day, and work out the keys. And, you had to keep a record of all the keys, because they never used the same wheel in the same position on consecutive days. So you'd have to tell the Bombe, "Never mind wheel one in the fast position, that was yesterday." Sometimes if you missed a day and you had a day in between, two days, you could reduce the wheel order considerably because of the same principle.

FARLEY: Oh, I see.

LEVENSON: One and two were on the days with nothing in between, then there was only three possibilities for the fast wheel, so you could reduce from 60 to about 6 wheel orders, if you had the wheel orders surrounding it. And there were a lot of other tricks we learned. Sometimes if you had enough sillies/cillies such special things, you could break the machine by hand. There were little analog machines available and you could sit down with the analog machine next to you. Break it by hand if you had enough wheel orders.

FARLEY: That analog machine. Was that a British fabricated machine?

LEVENSON: Yes, yes. And like everything British it wasn't exactly right. You had to correct the wheels because they had put some things in the wrong places and they never bothered, because they did that when they didn't know as much. But they never bothered to redo it. They just said, "Remember

this wheel is one off and this is two off." They gave the wheels colors. You had to know red was 2, blue was whatever, yellow was 3. You always had to take this into account. If it didn't come out you'd say, "Oh, did I correct, make the right corrections?"

FARLEY: You worked with the Bombe, then?

LEVENSON: No, we used to feed them, and then the girls operated the Bombes. And the Bombes were someplace else. I don't know where the hell they were.

FARLEY: They weren't in the general area?

LEVENSON: They weren't. No they were some ways off. The Bombes were in a special building. But then I moved over to the scrambler, the TUNNY problem, about three of us moved to the TUNNY problem, from ENIGMA. And there was COLOSSUS and we actually had hands on COLOSSUS, but we had the WRN's assistance, the Woman's Royal Naval Service.

FARLEY: Great girls.

LEVENSON: Known as WRNs, and, yes they were lots of fun.

FARLEY: Tell me about the TUNNY problem. Somebody said that was one of the better problems. There was much good intelligence.

LEVENSON: Yes, well. Oh ENIGMA produced marvelous technical intelligence because it was used rather low down, but what was most strategic was TUNNY because it was the link from War Department headquarters in Berlin to their Field Commanders.

FARLEY: What was different about it from the ENIGMA?

LEVENSON: Oh, it was a totally different machine. ENIGMA was a rotor machine.

FARLEY: Okay, and this was a...?

LEVENSON: And this was a pinwheel machine. And it was in some ways a much more difficult machine. But, with COLOSSUS I guess it was more fun to work on because there was more analytic. ENIGMA consisted pretty much of keeping track of the crib messages and occasionally having to do something a little more ingenious. But otherwise, that was in essence essentially what it was. They kept improving things, and doing a little better and you could play around with it, and do something, clever. With the TUNNY you had to make these runs on COLOSSUS. COLOSSUS in a sense was the first ?stored? program device ever built. In a sense it was a predecessor of the modern computer. And you could program it by setting switches.

FARLEY: Did we build that?

LEVENSON: No.

FARLEY: The British?

LEVENSON: It was built at the British post office in Dollis Hill.

FARLEY: Oh.

LEVENSON: And, it was very good, and it was quite a fast, I mean, by today's standards.

FARLEY: Was it considered a high level system?

LEVENSON: Oh yes, it was the highest level system there was. They say it was from Hitler to Rundstedt. And a big long message.

FARLEY: Do you remember any significant messages that you worked on?

LEVENSON: Oh yes, there were many, very many indeed. Oh, by the way, as far as that goes, on the ENIGMA, Rommel was the only one who ever suspected it was being read. Do you remember Marshall Rommel, in Africa? Well, he said, "Every supply ship meets a British Destroyer," he said, "that can't be coincidence. He said, "That's that damn machine."

FARLEY: Yes.

LEVENSON: And, they sent a couple of guys down to examine it. Of course you couldn't make any real cryptic changes in the middle of a war, communications would just fall apart. So they had five wheels, of which they selected three on any one day. They were fast, medium and slow. The fast wheel moved every time a letter was enciphered, the medium wheel moved once for every rotation of the fast wheel, and the slow wheel hardly moved at all. It required a middle wheel turnover itself, and that only happened infrequently. There were ways of getting information about which wheel was in which position because of the turnover points. And the change that these guys suggested and came from headquarters, when Rommel complained, was to rotate the wheels every eight hours. In other words, if you started the day one, two, three, after eight hours, at eight in the morning, you started the wheel changes at midnight. At eight in the morning you put three in the fast position so its three, one, two, and then at 4 o'clock it went two, three

one. Cyclic permutations. And if anything that helped us because you never could get any information on the which was the slow wheel because it never affected anything else, but after eight hours the slow wheel became the fast wheel. Now you could identify it. But they did nothing, because there was enough traffic in each of the eight hour periods so that didn't hurt you. Rommel was the only one who suspected.

FARLEY: There was lots of traffic though?

LEVENSON: Oh!

FARLEY: An abundance of traffic?

LEVENSON: And, the cover was very good. On the important messages they used to have triple cover. Three independent intercepts, so you could get perfect text. Since it depended on matching plain and cipher, and writing these menus if you had a garble, it could wreck the whole thing--so you had to have perfect text. So, they used to have three independent texts, and, one of the things you had to do was compare all three texts. When they differed, take the majority or try to avoid using them.

FARLEY: How about the quality of intercept by U.S. units as compared with the British?

LEVENSON: Well, the British were much better. They had a lot of civilian operators for one thing.

FARLEY: Even during the war?

LEVENSON: Oh yes. Who were, you know, that was their career. They weren't going to get out. And also their military. They had started earlier, and once you got into intercept,

that is where you stayed. They were more experienced, so they were generally their copy was much cleaner.

FARLEY: Did you get a chance to visit any of the intercept sites?

LEVENSON: Yes, we went to, occasionally we went up to Scarborough, I forget the names of the places. Yeah, we did. Some of the intercept operators were brought down to Bletchley, which was very good. Because, sitting out there in the cold, and wondering whether is anybody ever doing anything with all this. They'd take small groups and tour them through. And we talked to them, because they became very good at spotting interest items. They learned themselves what was interesting, and they flagged them for you, which was very good. And then, they'd come down for a day and we'd tell what them what they did and show them decrypts. They went away very happy.

FARLEY: That should have been done more often.

LEVENSON: Likewise, and then I went to where the scrambler intercept was taped. Because that was on taken originally on, not ???tape???

FARLEY: Bauded? Bauded tape?

LEVENSON: Yes, but it had, you know, a cross was here, and a dot was here.

FARLEY: Oh yes.

LEVENSON: Why can't I remember that name? It used a pen. ((undulator tape))

And then these girls would sit and find words at a time, read it and write a letter down. My God, what a total strain job, doing that all day long. They were very good, but you had to have that because to do that, the text had to be no drops. Because you wrote it on widths, and if you had a drop out, it would move everything over. So at the point of that particular tape, the first tape, could just lose a letter all together, the punch tape. But if you lost a letter, that was bad. A wrong letter didn't bother you, not nearly as much, I mean, if there were lots of them it could bother you. Now the ink tape, always made some mark if there was a burst of static then, it blurred it but you knew there was a letter there and that was very vital. But, since it was such a terrible job they tried to use perforated tapes, but it was not too successful because they had dropped letters. And if you dropped a letter, mostly, it pratically wrecked the thing. Well, not entirely, because it depended on where it happened. If it happened deep in the message it wasn't so bad. We always used the best tape because that gave an indication that there was a letter, even if it was the wrong letter. We went down there and talked to the girls and made them feel good and that this was important, and what great job they were doing. Without them there was nothing. Without the traffic you couldn't do anything. So that was very good.

FARLEY: Let me switch here. (TAPE 1, SIDE A ENDS) Military troops from Arlington Hall, were

there many of them over on liaison or visits at all?

LEVENSON: No, no. There weren't too many. Walt Jacobs finally came over toward the end to help. He was very, very good, so they asked him to extend and he stayed six months. He came over as a sergeant, but that didn't matter. He was very impressive. They wanted him very badly. Yes, we'd have guests occasionally. Al Small came once as a civilian, and Bob Ferner came once as a civilian, just to examine the operation. And Small wrote a report. But, we had very big British visitors. Churchill came once, Admiral Cunningham who sunk the Bismark, told us we had sunk the Bismark. I said, "I never fired a torpedo in my life. I didn't sink anything." "Well, the information." Actually they located the Bismark from a lot of different sources. I don't know that ENIGMA contributed anything directly to that, but it was very important that the Bismark be sunk. It was the biggest thing afloat. And the Germans had just sunk the Hood, which was the big British battleship, and it was important psychologically. They finally hit the Bismark with everything in the British Navy. It was an enormous ship; it was 85,000 tons, which even today, is a very big ship.

FARLEY: That's pretty big.

LEVENSON: But 18 inches of steel at the water level, so it was a hard one to sink. They had the whole Navy, because it was very discouraging when the Hood was sunk. It was

still in the early part of the war, when it wasn't so obvious that they were going to win.

FARLEY: Was Group Captain Winterbotham around?

LEVENSON: I never saw Wintherbotham. He was an SSO. These were the guys that took the material and took it to the field. They were the liaison between GCHQ and the Field Commanders and their job wasn't all that great. It was important to explain to the Commanders how sensitive this material was, that nobody should see it, and how they shouldn't talk about it and blah, blah, blah.

FARLEY: Did Telford Taylor ever visit?

LEVENSON: Oh yeah, Telford was there, and his whole gang. In fact, Al Friendly, who was billeted with us was part of that group. And Taylor was the head of that other contingent. They were all in the intelligence hut. They worked in Hut-3, and they got their finished product and wrote the reports.

FARLEY: Okay.

LEVENSON: And did the intelligence part there. There were some big names in that. In fact, Lewis did, one of the Justices,

FARLEY: Associate Justice, right.

LEVENSON: The other, what was his name, Lewis? ((Lewis Franklin Powell, Jr.))

FARLEY: Oh, yes.

LEVENSON: Oh, for heaven sakes.

FARLEY: I know, but I can't recall.

LEVENSON: Yes, he was in the group, and Al Friendly. He was a big thing in the newspaper business. And Taylor himself was a big name. He was a little frightening, a nice guy, but rather forbidding mane.

FARLEY: Until you got to know him?

LEVENSON: Yes, well, even then, he still had this manner, but it turned out it wasn't unfriendly, it just looked that way. I remember one incident involving Kevin O'Neill, who was later to become Director of GCHQ. I worked with him very closely on the scrambler problem. We sat at the same table. In fact, I got married in London and Kevin was one of the five people there besides the principals. We went to some wedding, and Taylor was there. And, this is typical. He was introduced to Kevin, and Kevin said, "Oh, nice to see you again. I've met you before." And Taylor looks at him and said, "I never met you before." Which is unusual, I mean, if you don't remember you say, well--

FARLEY: You pass it off.

LEVENSON: --or either you pretend you did, or you say, "Sorry I don't remember." He said, "I never saw you before." So about a half hour later, I was talking with Kevin, and Taylor comes over, interrupts and said, "Yes, I did meet you before," and tells him exactly where they met. But, so he didn't mean any harm, but he was, you know, "If I didn't meet you, I didn't meet you, whatever you say." Then when he remembered he made a point of coming over, and telling him. But, he was a brilliant man. Then he went on to Nurenburg as one of the lawyers. I guess he still is a professor at Columbia Law School.

FARLEY: Yes sir.

LEVENSON: He's written this book about Germany.

FARLEY: I want to read it. Arthur, there was always a lot of information about the good relationship, good working relationship between the Americans and the British. Was there ever at any time, any friction between the American GI's and maybe the British?

LEVENSON: You mean at GCHQ? Gee, I don't recall any friction. There were occasional individuals who rubbed them a little the wrong way. When we were first billeted out we had a Sergeant Heiman, who was quite wealthy. And, when we were being billeted he went over to the billeting officer and said, "I want the best thing you've got, the sky's the limit." Because he could well afford it.

FARLEY: He had the gelt.

LEVENSON: And this bothered them a little. I mean there was a war on and here are these guys. There were people fighting over there. Here's a guy sitting peacefully in England, and he has to have his luxuries. Bill had made me in charge of the enlisted men. It was no burden, and I didn't give any commands, but, he told them if there was any problem to take it to me. This guy came to me and mentioned this. He said, "What's the problem, too much money?" And I said, "Yes, that's exactly the problem." But I said, "You put him where you put everybody else. I mean, don't make any special arrangements." They were all billeted in rather modest places, and I

said, "Don't go searching for anything, just put him with everybody else." Everybody else accepted where they were billeted.

FARLEY: Did you make first lieutenant over there?

LEVENSON: Yes. I made first lieutenant.

FARLEY: Yes. In what, '44?

LEVENSON: I guess so. But then I didn't get to be captain until the war ended when they gave us all a promotion.

FARLEY: Tombstone. What do they call them?

LEVENSON: Yes. Tombstone Admirals, I made Tombstone Captain. But then I stayed in the Reserve and I ended up as a lieutenant colonel, courtesy of Watlington, remember Tom Watlington?

FARLEY: Yes.

LEVENSON: A dear friend. I briefed him when he first came in and we got to be sort of chummy and then, when I was up for promotion to lieutenant colonel, why I don't know, I was turned down. So I went to Watlington and said, "I don't know why they did this to me." I mean, I didn't see any reason why I should be promoted. I didn't see any reason why I shouldn't. So he said, "Oh, they can't do that." So, he wrote a wonderful letter saying that they missed the boat entirely.

FARLEY: Good.

LEVENSON: Asking them to reconsider and sure enough, from a major general they did.

FARLEY: They should.

LEVENSON: So, I was promoted courtesy of General Watlington.

Remember him?

FARLEY: Yes.

LEVENSON: Big man. He had trouble with some 250 pound sergeant, who he embarrassed about being overweight and he wanted him to exercise. And this was regarded as a terrible thing and he was pilloried for being so mean.

FARLEY: Yes.

LEVENSON: And today they're doing that, because now it's a big thing about exercise and overweight.

FARLEY: Keep in shape.

LEVENSON: And every unit has got jogging and exercises.

FARLEY: Detail, programming...

LEVENSON: And programs to keep people fit. Watlington was just ahead of his time.

FARLEY: Before his time.

LEVENSON: I never thought it was anything so terrible, why a big fat slob should be permitted to stay that way.

FARLEY: A poor example.

LEVENSON: Lose weight. I don't think it's good in the military that a man should be obviously overweight.

FARLEY: Right.

LEVENSON: Watlington himself, he kept, he was in good shape.

FARLEY: Yes. Good shape.

LEVENSON: Yes, he was always a fine looking man.

FARLEY: Arthur, back to Bletchley. How many huts were there, 3, 6, 8?

LEVENSON: Yes, they weren't numbered in any order. I don't remember a Hut-1 at all. Hut-3 was the reporting hut,

and Hut-6 was the Enigma. Now, when I went to work on the TUNNY problem, that was Block-H. It was not a hut anymore, that was a block. So some things were called blocks and the naval Enigma was worked in another block. Or maybe that was another hut, maybe that was Hut-3. No Hut-8. Because the naval Enigma was a slightly different problem. It was the same machine basically, but they used it in quite a different way and it was worked separately.

FARLEY: I see. Did you have any visits from American or U.S. Navy troops?

LEVENSON: Oh yes. We had, well we had a couple of Navy guys come in and work. Howie Campaign worked with me very closely on the TUNNY problem. Joe Eachus I remember was there, and Jim Pendergrass was there for a while. And they were all in uniform, all officers. But they didn't have an outfit and so were billeted off the post.

FARLEY: It was a good deal.

LEVENSON: The whole war they lived off the per diem and Campaigne made a fortune. He always lived modestly anyway. Good old Howie. So I think he banked the whole money that was supposed to be for rent because he could take it out of his pay. They were very good, Eachus and Campaigne of course were first rate. And Jim Pendergrass, excellent. They had a good bunch there.

FARLEY: Did Pres Currier come over at all?

LEVENSON: Well, Pres beat us all there. Pres was one of the very originals. But I don't remember Pres there during the war. Where was Pres during the war?

FARLEY: OP-20-G.

LEVENSON: OP-20-G, yeah. Working on the Jap problem, wasn't he?

FARLEY: Yes. Right.

LEVENSON: But he was here. He went over back in 1940, before we were in the war.

FARLEY: With Sinkov, Rosen.

LEVENSON: Sinkov and Rosen and Weeks.

FARLEY: Weeks, Bob Weeks.

LEVENSON: Yes. I don't know whatever happened to Weeks. Pres I got to know very well indeed. And Abe of course, I worked for Abe for many years.

FARLEY: Did Abe ever get over there while you were there?

LEVENSON: No, Abe was in Australia.

FARLEY: Australia, yes.

LEVENSON: Yes. See, once they had made this original contact, they went to other things. Abe spent the war in Australia. And Kully was here, with Arlington Hall, and Pres was in OP-20-G.

FARLEY: Yes.

LEVENSON: But Campaigne, Eachus, Pendergrass, there were a couple of others, who were American Navy. Very good people I guess.

FARLEY: All of this material was stamped ULTRA all the way?

LEVENSON: Yes, both Tunny and...

FARLEY: Was all ULTRA. So, when it left your area it was stamped ULTRA.

LEVENSON: Oh yes.

FARLEY: Okay.

LEVENSON: TOP SECRET ULTRA.

FARLEY: Right. Is there anything else we should cover...?

LEVENSON: The British called it MOST SECRET.

FARLEY: MOST?

LEVENSON: Yes, not TOP SECRET.

FARLEY: TOP SECRET, okay.

LEVENSON: Yes, they had SECRET and MOST SECRET.

FARLEY: Right.

LEVENSON: They didn't have CONFIDENTIAL.

FARLEY: Right. Is there anything else we should cover on the operations in Bletchley. I want to get into the Ticom and the train bit.

LEVENSON: Oh yes.

FARLEY: Before, maybe the Battle of the Bulge. Is there anything?

LEVENSON: Battle of the Bulge took us by surprise and we were a little ashamed of the intelligence dearth because they had put on a silence and I remember just before there was no traffic. We had two tapes, and that should have been a sign.

FARLEY: Nobody questioned that?

LEVENSON: I don't know, at least to the best of my knowledge. You see, I was not on the intelligence side but afterwards they said, "Well, that's why we had no tapes." They had imposed a silence and that should have been a real indicator.

FARLEY: That's one of the prime indicators.

LEVENSON: That's a tactical indicator.

FARLEY: Right. And how long did that go on before the Germans kicked it off? A week, two days?

LEVENSON: No, no. It was very short, it was very short. A couple of days, was it. And it was right before Christmas.

FARLEY: Did you ever get any feedback from the SSOs or the G-2s?

LEVENSON: Well, on Enigma, as I say, we used to get big wheel visitors who would come in and then I remember the man who even his name was secret. He turned out to be very a unimpressive man. Came to talk to us. Charlie, he was known as the Chief, and Charlie and his real name.

FARLEY: Britisher?

LEVENSON: Yes. Oh yes, he was the head of the British Intelligence. I know we read an enormous message. Rommel was appointed Inspector General of the West, and he inspected all the defenses along the Normandy beaches and send a very detailed message that I think was 70,000 characters and we decrypted it as a small pamphlet. It was a report of the whole Western defenses. How wide the V shaped trenches were to stop tanks, and how much barbed wire. Oh, it was everything and we decrypted that before D-Day.

FARLEY: That's what I was going to ask you.

LEVENSON: That was, we were told, that must have been tremendous help.

FARLEY: You should get a citation for that.

LEVENSON: Yes, well, the whole unit.

FARLEY: Yes, that's what I mean.

LEVENSON: That I know was one of the key things and then we located a German Panzer Grenadier division, a tank division, just close to where they were going to drop the 101st Airborne. They would have been torn to pieces. So they moved it, based on intelligence.

FARLEY: Different jump zone?

LEVENSON: Yes, based on this information. That I'm sure saved lots of young men in the 101st Airborne, which was a "crack" division. That was one of our really, the 86th something, the 101st were our best Airborne divisions. That would have been a terrible loss.

FARLEY: Did Eisenhower come by?

LEVENSON: No, I don't recall Eisenhower. I recall hearing a speech of his in London, though, to which we were all invited. But that was at the end of the war.

FARLEY: Did he indicate that there was a special type intelligence that was doing a great job or not?

LEVENSON: Yes, we were getting feedback of this business of that, Rommel's message as inspector, and we would get other tips. We knew about Rommel's death before it became public. And, also, even a dead Jap. The Japanese Admiral...

FARLEY: Yamamoto.

LEVENSON: Yamamoto was shot down. We had that.

FARLEY: You saw that in the Enigma?

LEVENSON: Yes, not in the Enigma, in the Tunny.

FARLEY: Tunny. Oh.

LEVENSON: Yes, they passed on the information, and that was a week or so before it was made public. So we were generally aware that this was very hot stuff and Enigma was very good. Patton, Patton didn't believe it. And we got one message that said that his headquarters was going to be strafed at a certain time. He said, "Ha!" So he stood outside and then they came over and started shooting. He was a believer after that. But he was a man of great personal courage.

FARLEY: I guess so.

LEVENSON: Oh yes. I mean, he was such a mixed character. Actually, that was a very good movie, they made. Because I think you saw both aspects of his person, but he became a believer.

FARLEY: Arthur, how soon before VE-Day were you aware that things were dying down, that the Germans were ready to throw in the sponge?

LEVENSON: Yes, VE-Day was itself very interesting. Kevin, no I guess that was VJ-Day. That was VJ-Day, no it wasn't, it was VE-Day. No, VE-DAY we celebrated in Paris, yes, that's right. The Ticom trip.

FARLEY: Yes.

LEVENSON: That's right. VJ-Day was celebrated in London. Kevin O'Neill and I and a brother of his who later became a priest, named Niler, and a guy from the intelligence side, named Lou Stone, who was 6'7" before we had monsters in basketball this was quite a size, celebrated. And the four of us got quite drunk, running around London. It was great fun. But VE-Day was about a week before we were sent to Paris to get ready to move in. It was obvious that the Germans were losing but I

don't know that it was clear yet that there was a surrender.

FARLEY: Was there a decrease in traffic?

LEVENSON: Well, yes, and then the links started to get closer and closer together. Berlin/Paris finally both ends came together, at, what is that place in Austria?

FARLEY: Vienna?

LEVENSON: Well...

FARLEY: Salzburg?

LEVENSON: Salzburg. Yes, one link was being pushed down from Berlin and from the West and the Paris link when Paris was taken. So they finally, we found, and that's what we did. We found both ends of that link, with the guys. We took them back to London and they set it up, the way they did during the war.

FARLEY: Yes.

LEVENSON: They broadcast stuff at Beaconfield and we set up the whole thing.

FARLEY: Well, what did they do?

LEVENSON: They taught us how they set up the wheel patterns.

FARLEY: Okay. At Bletchley they just said, "Okay, there's not much work around here, so you get ready to go on the Ticom?

LEVENSON: Well, I don't think it happened quite that way, well, no. They wanted to capture these things, and capture the machines. Enigma machines we had tons of. But Tunny machines we'd never seen and we were most anxious to see them. So they were planning this in advance. But we had one sergeant, who was from the real Army and he couldn't get over this outfit. Because we weren't like the Army at all. Discipline was poor, and we used to drive him nuts. I remember we had a sergeant named Howard Porter, who always went around without a hat on and his blouse open, and once this sergeant was talking

to Bill Bundy who was our CO and Porter came right along and the sergeant was ready to really dress him down because he didn't look like a soldier. Bill grabbed his arm and said, "Well, let him go, he's got a lot on his mind." It turned out that Howard had been a professor at Yale when Bill was a student there. He was a former instructor. He thought it would be a little awkward. And Howard was a Classics professor at Yale. That's the kind of enlisted men we had, generally. There were all sorts of very strange people.

FARLEY: Okay, when you went on the Ticom trip--

LEVENSON: Yes, then we went on Ticom. When we left on the Ticom trip, this sergeant said, "Boy, the war must really be over if they're sending you guys." Ashburn, his name was. Sergeant Ashburn. "The war sure must be over if they're sending you guys." And, yeah, we got to Paris and then we went to Salzburg. But I was in Paris on VE-Day and that was quite exciting.

FARLEY: Oh, I'll bet.

LEVENSON: We went to the Arch and DeGaulle gave a speech. And boy, everybody loved Americans then. Couldn't do enough for you.

FARLEY: It's changed, hasn't it?

LEVENSON: Yes, it's changed. Then we were "Liberators." Oh, they made a great fuss over us. And I remember having dinner with a French family. He was a wine merchant. He had some terrific stuff that he had hidden from the Germans said he was just saving it for this very night, and who better to share it with than an American. Jim Leighty was with me, just the two of us and his family, and then we went to the, we had a marvelous meal. I don't know what it was. It's a shame I couldn't appreciate what a great wine it was. But I'm sure it was something very

special indeed, since he was a wine merchant. He said that he always had hidden it from the Germans. Then afterwards we went down to the celebration. They had some small kids and I know I had one of the daughters on my shoulders, and that was really very touching, really very nice.

FARLEY: I can imagine.

LEVENSON: And it was great, great excitement.

FARLEY: Arthur, when you went on the Ticom bit did they tell what to look for or just by general guidance?

LEVENSON: Well, they told us. We wanted the Tunny machines. And then we had some idea of who the people were and we interrogated them and mostly they were very cooperative. Occasionally you'd get a guy and then we told him if he doesn't want to answer questions we're turning him over to the Russians. And they talked. Then when we took this group back to England with us they thought they were very lucky indeed, because we passed along the way what they called dust bins. These were just curious enclosures all out in the open, teeming with prisoners, and they were much better off being with us. So Major Testor and I took a dozen of them back to England. Six trucks. He was in the front of the lead one, and I was in the back. It was funny. Then we became very friendly. These were not combat troops, they were communications. I had a gun. Finally I told them I'd let them carry it. They were obviously not going to run anywhere. In fact, they felt much better off with us than anywhere else, including escape. Because they'd only be picked up and terrible things would happen. We were giving them pretty good food.

FARLEY: These were German POW's driving the trucks?

LEVENSON: Oh yes.

FARLEY: And riding the equipment?

LEVENSON: Oh yes.

FARLEY: And you in the lead?

LEVENSON: Well, no, Testor was in the lead and I was in the back. In between there was nobody. As I say, they were pretty good guys. When we got to Wiesbaden, they saw this German carrying the gun, they said, "What's going on?" And I said, "Oh, he's all right," and, "Well, I don't know, it's all very irregular."

FARLEY: How did you get from Paris to Salzburg?

LEVENSON: Yes, on these trucks, because we were bringing the trucks back because the trucks had all the equipment in them.

FARLEY: Oh, you picked up some of the trucks in Paris or in Salzburg?

LEVENSON: No, in Salzburg.

FARLEY: Okay, all right.

LEVENSON: We drove them all the way to, was it La Havre? Some port. Then we got them on an LST or something.

FARLEY: Okay.

LEVENSON: And then we landed in London. And then one of them, a nice little old man, said he always wanted to go to London. He just before the war broke out he had finally gotten enough money and then the war came, and then his kids. I said, "Well, now you're getting a free trip."

FARLEY: Were these COMM Centers?

LEVENSON: These were the communication...

FARLEY: Mobile COMM Center?

LEVENSON: Yes, it was the communication, in fact, it was Rundstedt's own communications party. And they were nice trucks and they slept in the trucks. They had

beds in them.

FARLEY: They had radio sets and..?

LEVENSON: They had antenna, radio receivers, and the encryption devices, and bunks. Two men in each truck. They were big trucks. There was a driver and a helper and they could set up the whole thing. They were trained and they did the encryption.

FARLEY: How many were there in the convoy?

LEVENSON: Six trucks.

FARLEY: Six, okay.

LEVENSON: 12 guys, and...

FARLEY: Did you take them all the way back to England?

LEVENSON: Yes. Then they set them up in Beaconfield, some place outside of London. About a 100 yards apart we set up the antenna, they broadcast to each other and showed us how they set the patterns, what the whole procedure was. They told us there was a death penalty for sending the depths, but they had sent depths.

FARLEY: Did they?

LEVENSON: They were still alive.

FARLEY: Did you get a Tunny machine?

LEVENSON: Oh yes, we got it, sure. I think there's one in the museum.

FARLEY: Is there?

LEVENSON: Yes, we got several. They were good, they were well constructed. They had been built when things were good.

FARLEY: Oh yes.

LEVENSON: So, they had no ersatz material. They used all steel.

FARLEY: Where did that train go? Was it brought back to Arlington Hall or was it part of..?

LEVENSON: Well, some of it was brought back and some the British took and we got some of it.

FARLEY: Because we're trying to locate some of that equipment.

LEVENSON: Oh really? Well I know some was here because I had used it as a demonstration at some point.

FARLEY: Schukraft said the last he saw was one truck parked by the warehouse at Arlington Hall.

LEVENSON: That's quite possible.

FARLEY: And he doesn't know what happened to it.

LEVENSON: Schukraft doesn't know? Well, he would know. I thought they had some in the museum. They don't have any?

FARLEY: I don't know.

LEVENSON: Did it get to Mechanicsburg? I know we had some material there.

FARLEY: Some of it could be up there, yes.

LEVENSON: Yes. Oh, what a shame.

FARLEY: But, I guess it was Schukraft made your experience sound a little more, how shall I say, exciting? He said you were in charge of all of this train and you had 100 POWs.

LEVENSON: Oh, no. He sort of dramatized it.

FARLEY: You weren't armed.

LEVENSON: Well, I had a gun but I gave it away. Oh, we did have one train where I was supposed to be the troop commander. And these were Americans. They were sort of a gamey lot. They were

giving me fits and I didn't care for that too much. But that was at the end. But everybody was very happy, but that was in this country when we were going to Fort Meade to get discharged. There was a certain rowdiness but it was good natured. Going in I did have business. When we got to Belgium--we sailed from Belgium first. These trucks had no cap numbers and we looked like German troops. And the people were very mad at the Germans and they were throwing things at the truck. I got hit once when they threw a tin can or something.

FARLEY: When you were moving through the area?

LEVESON: Through Liege. That was quite interesting because when we got there they said, "Where are we?", and I said, "Litisch?", which is the German name for Liege. They said, "No, it can't be," and I said "What do you mean?" Well, they said they were told it was destroyed by the V bombs. Then they said, "You can't go to London because London was destroyed by the V bombs." I said, "Well, you'll see it when we get there." Where we were there was no evidence of that. They said they didn't really believe everything they were told. Now they know that wasn't the case but, they were really scared. Then I would leave them and go off and they pleaded with me that they were being threatened. That I should stay there because without me they were in danger.

FARLEY: That's funny.

LEVENSON: I said, "Well, I guess you were very well liked here." (laughter)

FARLEY: Sounds that way.

LEVENSON: Yes.

FARLEY: In Salzburg they made, the Germans made no attempt to destroy anything?

They just gave it to you intact?

LEVENSON: Oh sure. They as I say answered most questions. It was very rare that you got a guy who hesitated, but then you said, "Well we'll turn you over to the Russians." Then they talked.

FARLEY: That did it.

LEVENSON: But most of them didn't need any threats. As I say they were not combat troops and I don't know, everybody in Germany denied ever having been a Nazi.

FARLEY: Isn't that the truth.

LEVENSON: But, these guys, I don't think they ever felt very strongly about it. They would do anything we asked. Partly it was that they felt they were better off with us than any alternative. But in Belgium they got really scared. They really thought they'd be lynched or something.

FARLEY: I can believe it then.

LEVENSON: Because there were hard feelings, and it was so obvious. We never bothered to write capture numbers on the trucks or give any identification. We did put a big star, big white star, but for all purposes it looked just like the German trucks that the natives had seen during the war. They thought, "Well, if the Wehrmacht is back, what's going on here?" They didn't ask questions either. They were just waiting for something, as I say. When I walked off, they got scared to death, they said, "No, no, stay around."

FARLEY: Belgians hate the Bosch, don't they?

LEVENSON: Oh yes, well, they had treated them badly. I guess some even had memories of the first war.

FARLEY: Arthur, was the Ticom effort pretty successful, in your opinion?

LEVENSON: Yes, for what we wanted, yeah. We found a whole lot of documents, and machines, and we had quite alot I thought. We got what we were looking for.

FARLEY: Did they get anything from the Italians or do you know whether they had anything worth picking up?

LEVENSON: I don't recall anything from the Italians. But you know they were several different Ticom trips. I was on the one involved with the Tunny because I had been working on it but there was one that went over to the Danish border. I think Bill Bundy went on that one. So there were several, so other people may know a little more about what Captain Bundy did. There were about five Ticom teams.

FARLEY: Okay.

LEVENSON: Yeah, we got a long briefing about that. I know they taught target identification committee, codes, what we look for and what we should see. We got long lectures.

FARLEY: Oh, okay.

LEVENSON: Yes, that we did get.

FARLEY: Forgotten who it is, somebody asked me to ask you about the German Beaudot equipment?

LEVENSON: Yes.

FARLEY: What is that?

LEVENSON: Well, the Tunny used the Beaudot code and they had a few such machines. They had also a thing called Hellschreiber which was a different machine which sent in the clear mostly and it was a very fast transmission. I wasn't involved but it used the Beaudot code and it was much faster. Tunny used a five-bit code and had a start/stop pulse. It would shift to upper case and shift to lower case, 26 letters of the alphabet and then these special shifts and period, comma, word spacer.

FARLEY: Should we talk anymore about Ticom or do you think we've covered that pretty well?

LEVENSON: I think that's pretty much that story. Yes, I think we got the machines, we got a lot of documents and we observed how they operated under war time conditions and how they set the Tunny. There was 12 wheels on the machine and a lot of pins to set. And one guy would read it off. He had a little stylus that he'd use to set. They were very good at it because they were several hundred. It was quite a job. And, then to make sure they were right after he had them set, he'd call the pattern back from the wheel to the guy with the paper. That's quite a lengthy operation. But they got pretty good at it. They called a plus a knocker and a zero was keiner. He's going very fast, drei knocker, zwei keiner, knocker, keiner, drei knocker, drei keiner, and he was rolling the wheel around and pushing the keys. And, its amazing if you get enough practice, he just rattled them off so fast, then he'd call back in the same way.

FARLEY: Did the British get most of the equipments over there, do you think?

LEVENSON: I think they did, because they had it. But I'm sure some of it came to the U.S., but they kept most of it.

FARLEY: Arthur, was there any routine in closing down the operations at Bletchley or did that sort of phase out by itself?

LEVENSON: It sort of phased out by itself, as I recall. We did do a little of some of the unsolved problems, and we worked just to tidy things up a bit. Then there was a small group set up that started to look at Russian traffic. I remember that.

FARLEY: Was there any of that done before the war ended?

LEVENSON: Not that I know of. I think we were too busy. There may have been somebody who was just monitoring it, but just as soon as the war ended there was quickly set up something.

FARLEY: Was it a combined American and British group?

LEVENSON: Yes.

FARLEY: Was it? Somebody had said that earlier in the war the British had a little area off by itself that was off-limits.

LEVENSON: Oh, it's possible, but I don't think so, because I think they were too, much too involved in this. They did have one exchange with the Russians which was very funny. They discussed Comint with the Russians, and they said, "Oh yes," well, "let's see what we can do for you?" So, the British had recovered a callsign book from the Germans. They said, "Well, that's a good thing to start with." And it was like the Marx Brothers movie where they give each other salamis for presents. The Russians gave the identical book but they had captured it. They gave an original, and so, everybody laughed and that was the end of it.

FARLEY: Did we feed them any COMINT at all?

LEVENSON: We did. We gave them some warning of the invasion of June '41. They were told they have good reason to believe that the Russian soldiers ((words unintelligible)). We were great friends with them then. The problems started after that. I understand Molotov or one of them cried, "Why is he doing this? Actually, we lived up to the treaty. In effect, there is much evidence that Hitler was one of the very few people in the world that Stalin thought anything of. He thought he was a great guy.

FARLEY: Two of a kind.

LEVENSON: Yes, exactly. Very much of a kind. And that's why when Hitler invaded Russia, there was genuine surprise, and hurt feelings. Why did he do this to me?

FARLEY: They didn't believe that old gag about don't trust anybody even your own father.

LEVENSON: Well, that crowd should have known better. But he would have known nobody would trust him, why should he trust anyone else? They were very good. It was a great time. It was an exciting thing and it was wonderful as an experience. As a war time experience it was unbeatable. You really felt, while you weren't threatened you were really making a good contribution to the war effort.

FARLEY: Yes, that's right.

LEVENSON: Of course we worked six days a week, and probably close to 60-hour weeks, but we got Sunday off. When I went to work on the Tunny, the machine was broken into two sets of the wheels, Kei wheels and the Sei wheels and they were broken in different places. You had to recover the Kei wheels first, and then take off the effect of the Kei wheels. This was known as "dekeiing." Then you broke the Sei wheels and there were 2 parties working on each. I was sent where they worked the Sei wheels. Then after a while, they sent people from this part to where he Kei wheels were recovered. They were called Mr. X. There were 4 of us and we each took a week of the month rotation as Mr. X in the other outfit. I'd go from one nightshift in one place to nightshift in the other place and it was really awful. And then, in the wonderful British way, they decided, "Well, we'll send some people from the Kei place to the Sei place." That came much later. So they called him Mr. Minus X.

FARLEY: That was the title --"Mr. Minus X."

LEVENSON: And there was, wonderful British type joke that was making the rounds there, about Noah and the Ark. And all the animals came in two by two then the adders came. Noah told them all to multiply and the adders said, "We can't multiply, we're adders." "So well," he said, "we'll do

it by logs."

FARLEY: Oh, leave it to the British. Leave it to them. Arthur, I always ask the question, "What do you feel is the most satisfying accomplishment of your tour over there?

LEVENSON: Satisfying accomplishment?

FARLEY: That you personally achieved.

LEVENSON: Well, the fact that I worked with both problems, there was only I think George Vergine and I were the only ones who went from the Enigma to the Tunny. And that was particularly gratifying. Just the fact that you could overcome any feelings about not being in the trenches by feeling that you were doing something very useful. And both the Brits and the Americans were very good about telling us how useful this was. In fact, I guess, it was the greatest contribution ever made and maybe that ever will be.

FARLEY: Absolutely.

LEVENSON: I think it reached its peak then, in terms of exploitability. I don't think in Vietnam we did quite as well. It was certainly greater than World War I. We're doing pretty well, today, still. I mean in the war situation things got better. There's much more traffic and more mistakes. I'm not advocating war as a way of solving machines, but it makes the job easier. I doubt if any future war that we fight will be quite as big a contribution in intelligence, communications intelligence. But the fact of working in both areas was a great satisfaction.

FARELY: Arthur, we're getting close to one tape, do you want to go for two or do you want to postpone it, maybe later on?

LEVENSON: Maybe we could make it another session.

FARLEY: Sure.

LEVENSON: I have to go back and I have some writing to do on a report. So this is fine. Thank you.

FARLEY: Oh, this is very good, this is good for one anyway, and thank you much. I say, this is good for one cassette.

LEVENSON: Well, thank you, it was fun to sit and reminisce.